

## SEQUENCE LISTING

<110> NAKANISHI, Atsushi  
HIKICHI, Yukiko  
UNO, Yumiko

<120> Novel Protein and its DNA

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<150> JP 2002-061133

<151> 2002-03-06

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Cys Asn Thr Pro Gln Gly Phe Leu Leu His Tyr Cys Leu Leu Ala Leu
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Thr Gln Gly Ile Val Val Asn Gly Leu Val Asn Ile Ser Ile Ser Thr
      115             120             125
Ile Glu Lys Arg Tyr Glu Met Lys Ser Ser Leu Thr Gly Leu Ile Ser
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Ser Ser Tyr Asp Ile Ser Phe Cys Val Leu Ser Leu Phe Val Ser Phe
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Phe Gly Glu Arg Gly His Lys Pro Arg Trp Leu Ala Phe Ala Ser Phe
      165             170             175
Met Ile Gly Leu Gly Ala Leu Val Phe Ser Leu Pro His Phe Phe Ser
      180             185             190
Gly Arg Tyr Glu Leu Gly Ser Ile Phe Glu Asp Thr Cys Leu Thr Arg
      195             200             205
Asn Ser Thr Arg Cys Ser Ser Ser Thr Ser Leu Leu Ser Asn Tyr Phe
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Tyr Val Phe Val Leu Gly Gln Leu Leu Leu Gly Thr Gly Gly Thr Pro
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<223> Probe

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<210> 48

<211> 1737

<212> DNA

<213> Mus musculus

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<211> 532

<212> DNA

<213> Mus musculus

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<213> Mus musculus

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<211> 724

<212> PRT

<213> Rattus norvegicus

<400> 52

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Ser	Ala	Val	Ala	Ser	Arg	Asn	Gln	Asn	Gly	Gly	Ser	Gln	Pro	Arg	Glu
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Ser	Glu	Asp	Pro	Gln	Lys	Ser	Thr	Glu	Pro	Ser	Pro	Pro	Ser	Ser	Thr
	50				55						60				
Leu	Pro	Ala	Ser	Asp	Glu	Pro	Pro	Gly	Ser	Gln	Leu	Ser	Glu	Leu	Glu
	65				70					75				80	
Glu	Gly	Pro	Cys	Gly	Trp	Arg	Asn	Phe	His	Pro	Gln	Cys	Leu	Gln	Arg
				85				90						95	
Cys	Asn	Asn	Pro	Lys	Gly	Phe	Leu	Leu	His	Tyr	Cys	Leu	Leu	Ala	Leu
			100					105						110	
Thr	Gln	Gly	Ile	Val	Val	Asn	Gly	Leu	Val	Asn	Ile	Ser	Ile	Ser	Thr
		115					120						125		

Ile	Glu	Lys	Arg	Tyr	Glu	Met	Lys	Ser	Ser	Leu	Thr	Gly	Leu	Ile	Ser	130	135	140
Ser	Ser	Tyr	Asp	Ile	Ser	Phe	Cys	Val	Leu	Ser	Leu	Phe	Val	Ser	Phe	145	150	155
Phe	Gly	Glu	Arg	Gly	His	Lys	Pro	Arg	Trp	Leu	Ala	Phe	Ala	Ser	Phe	165	170	175
Met	Ile	Gly	Leu	Gly	Ala	Leu	Val	Phe	Ser	Leu	Pro	His	Phe	Phe	Ser	180	185	190
Gly	Arg	Tyr	Glu	Leu	Gly	Thr	Ile	Phe	Glu	Asp	Thr	Cys	Leu	Thr	Arg	195	200	205
Asn	Ser	Thr	Arg	Cys	Ala	Ser	Ser	Thr	Ser	Leu	Leu	Ser	Asn	Tyr	Phe	210	215	220
Tyr	Val	Phe	Val	Leu	Gly	Gln	Leu	Leu	Leu	Gly	Thr	Gly	Gly	Thr	Pro	225	230	235
Leu	Tyr	Thr	Leu	Gly	Thr	Ala	Phe	Ile	Asp	Asp	Ser	Val	Pro	Thr	His	245	250	255
Lys	Ser	Ser	Leu	Tyr	Ile	Gly	Ile	Gly	Tyr	Ser	Met	Ser	Ile	Leu	Gly	260	265	270
Pro	Ala	Ile	Gly	Tyr	Val	Leu	Gly	Gly	Gln	Leu	Leu	Thr	Met	Tyr	Ile	275	280	285
Asp	Val	Ala	Met	Gly	Gln	Ser	Ser	Asp	Leu	Thr	Glu	Asp	Asp	Pro	Arg	290	295	300
Trp	Leu	Gly	Ala	Trp	Trp	Ile	Gly	Phe	Leu	Leu	Ala	Trp	Leu	Phe	Ala	305	310	315
Trp	Ser	Leu	Ile	Met	Pro	Phe	Ser	Cys	Phe	Pro	Lys	His	Leu	Pro	Gly	325	330	335
Thr	Ala	Lys	Ile	Gln	Ala	Gly	Lys	Thr	Ser	Gln	Thr	His	Gln	Asn	Asn	340	345	350
Ser	Thr	Ser	Phe	Gln	His	Met	Asp	Glu	Asn	Phe	Gly	Lys	Ser	Ile	Lys	355	360	365
Asp	Phe	Pro	Thr	Ala	Val	Lys	Asn	Leu	Met	Arg	Asn	Thr	Val	Phe	Ile	370	375	380
Cys	Leu	Val	Leu	Ser	Thr	Thr	Ser	Glu	Ala	Leu	Val	Thr	Thr	Gly	Phe	385	390	395
Ala	Thr	Phe	Leu	Pro	Lys	Phe	Ile	Glu	Asn	Gln	Phe	Gly	Leu	Thr	Ser	405	410	415
Ser	Ile	Ala	Ala	Thr	Leu	Gly	Gly	Ala	Val	Leu	Ile	Pro	Gly	Ala	Ala	420	425	430
Leu	Gly	Gln	Ile	Leu	Gly	Gly	Val	Leu	Val	Ser	Lys	Phe	Lys	Met	Lys	435	440	445
Cys	Lys	Asn	Thr	Met	Lys	Phe	Ala	Leu	Cys	Thr	Ser	Gly	Val	Ala	Leu	450	455	460
Met	Leu	Ser	Phe	Val	Phe	Ile	Tyr	Ala	Lys	Cys	Glu	Asn	Gly	Pro	Phe	465	470	475
Ala	Gly	Val	Ser	Glu	Ser	Tyr	Asn	Gly	Thr	Gly	Glu	Met	Gly	Asn	Leu	485	490	495
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Pro	Leu	Cys	Gly	Ser	Asp	Gly	Val	Gln	Tyr	Phe	Ser	Pro	Cys	Phe	Ala	515	520	525
Gly	Cys	Leu	Asn	Ser	Val	Ser	Asn	Arg	Lys	Pro	Lys	Ala	Tyr	Tyr	Asn	530	535	540
Cys	Ser	Cys	Ile	Glu	Arg	Lys	Val	Asp	Ile	Thr	Ser	Thr	Ala	Glu	Ser	545	550	555
Pro	Asp	Phe	Glu	Ala	Arg	Ala	Gly	Lys	Cys	Lys	Thr	Gln	Cys	Ser	Asn	565	570	575
Leu	Pro	Ile	Phe	Leu	Gly	Ile	Phe	Phe	Ile	Thr	Val	Ile	Phe	Thr	Phe			

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Met	Ala	Gly	Thr	Pro	Ile	Thr	Val	Ser	Ile	Leu	Arg	Cys	Val	Asn	His
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Arg	Gln	Arg	Ser	Leu	Ala	Leu	Gly	Val	Gln	Phe	Met	Leu	Leu	Arg	Leu
	610						615					620			
Leu	Gly	Thr	Ile	Pro	Gly	Pro	Ile	Ile	Phe	Gly	Val	Thr	Ile	Asp	Ser
625					630					635					640
Thr	Cys	Val	Leu	Trp	Asp	Ile	Asn	Glu	Cys	Gly	Thr	Lys	Gly	Ala	Cys
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Trp	Ile	Tyr	Asp	Asn	Ile	Arg	Met	Ala	His	Met	Leu	Val	Ala	Ile	Ser
			660					665					670		
Val	Thr	Cys	Lys	Val	Ile	Thr	Ile	Phe	Phe	Asn	Gly	Leu	Ala	Ile	Val
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Leu	Tyr	Lys	Pro	Pro	Pro	Pro	Gly	Thr	Glu	Val	Ser	Phe	Gln	Ser	Gln
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Asn	Val	Val	Val	Ser	Thr	Ile	Thr	Val	Glu	Glu	Asp	Leu	Asn	Lys	Ile
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<210> 53

<211> 2172

<212> DNA

<213> Rattus norvegicus

<400> 53

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gagggacctt	gcgggtggag	gaacttccac	ccccagtgtc	ttcagcgctg	caacaacccc	300
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Ser	Ala	Val	Ala	Ser	Arg	Asn	Gln	Asn	Gly	Gly	Ser	Gln	Pro	Arg	Asp
		35				40						45			
Ser	Glu	Asp	Pro	Gln	Lys	Ser	Thr	Glu	Pro	Ser	Pro	Pro	Ser	Ser	Thr
	50				55						60				
Leu	Pro	Ala	Ser	Asp	Glu	Pro	Pro	Gly	Ser	Gln	Leu	Arg	Glu	Leu	Glu
65					70					75					80
Glu	Gly	Pro	Cys	Gly	Trp	Arg	Asn	Phe	His	Pro	Gln	Cys	Leu	Gln	Arg
				85					90					95	
Cys	Asn	Asn	Pro	Lys	Gly	Phe	Leu	Leu	His	Tyr	Cys	Leu	Leu	Ala	Leu
			100					105					110		
Thr	Gln	Gly	Ile	Val	Val	Asn	Gly	Leu	Val	Asn	Ile	Ser	Ile	Ser	Thr
		115					120					125			
Ile	Glu	Lys	Arg	Tyr	Glu	Met	Lys	Ser	Ser	Leu	Thr	Gly	Leu	Ile	Ser
	130					135					140				
Ser	Ser	Tyr	Asp	Ile	Ser	Phe	Cys	Val	Leu	Ser	Leu	Phe	Val	Ser	Phe
145					150					155					160
Phe	Gly	Glu	Arg	Gly	His	Lys	Pro	Arg	Trp	Leu	Ala	Phe	Ala	Ser	Phe
				165					170					175	
Met	Ile	Gly	Leu	Gly	Ala	Leu	Val	Phe	Ser	Leu	Pro	His	Phe	Phe	Ser
			180					185					190		
Gly	Arg	Tyr	Glu	Leu	Gly	Thr	Ile	Phe	Glu	Asp	Thr	Cys	Leu	Thr	Arg
		195					200					205			
Asn	Ser	Thr	Arg	Cys	Ala	Ser	Ser	Thr	Ser	Leu	Leu	Ser	Asn	Tyr	Phe
	210					215					220				
Tyr	Val	Phe	Val	Leu	Gly	Gln	Leu	Leu	Leu	Gly	Thr	Gly	Gly	Thr	Pro
225					230					235					240
Leu	Tyr	Thr	Leu	Gly	Thr	Ala	Phe	Ile	Asp	Asp	Ser	Val	Pro	Thr	His
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Lys	Ser	Ser	Leu	Tyr	Ile	Gly	Ile	Gly	Tyr	Ser	Met	Ser	Ile	Leu	Gly
			260					265					270		
Pro	Ala	Ile	Gly	Tyr	Val	Leu	Gly	Gly	Gln	Leu	Leu	Thr	Met	Tyr	Ile
		275					280					285			
Asp	Val	Ala	Met	Gly	Gln	Ser	Ser	Asp	Leu	Thr	Glu	Asp	Asp	Pro	Arg
	290					295					300				
Trp	Leu	Gly	Ala	Trp	Trp	Ile	Gly	Phe	Leu	Leu	Ala	Trp	Leu	Phe	Ala
305					310					315					320
Trp	Ser	Leu	Ile	Met	Pro	Phe	Ser	Cys	Phe	Pro	Lys	His	Leu	Pro	Gly
				325					330					335	
Thr	Ala	Lys	Ile	Gln	Ala	Gly	Lys	Thr	Ser	Gln	Thr	His	Gln	Asn	Asn
			340					345							

355	360	365
Asp Phe Pro Thr Ala Val Lys Asn Leu Met Arg Asn Thr Val Phe Ile		
370	375	380
Cys Leu Val Leu Ser Thr Thr Ser Glu Ala Leu Val Thr Thr Gly Phe		
385	390	395
Ala Thr Phe Leu Pro Lys Phe Ile Glu Asn Gln Phe Gly Leu Thr Ser		400
	405	410
Ser Phe Ala Ala Thr Leu Gly Gly Ala Val Leu Ile Pro Gly Ala Ala		415
	420	425
Leu Gly Gln Ile Leu Gly Gly Val Leu Val Ser Lys Phe Lys Met Lys		430
	435	440
Cys Lys Asn Thr Met Lys Phe Ala Leu Cys Thr Ser Gly Val Ala Leu		445
	450	455
Met Leu Ser Phe Val Phe Ile Tyr Ala Lys Cys Glu Asn Gly Pro Phe		460
465	470	475
Ala Gly Val Ser Glu Ser Tyr Asn Gly Thr Gly Glu Met Gly Asn Leu		480
	485	490
Thr Ala Pro Cys Asn Ala Asn Cys Asn Cys Leu Arg Ser Tyr Tyr Tyr		495
	500	505
Pro Leu Cys Gly Ser Asp Gly Val Gln Tyr Phe Ser Pro Cys Phe Ala		510
	515	520
Gly Cys Leu Asn Ser Val Ser Asn Arg Lys Pro Lys Ala Tyr Tyr Asn		525
	530	535
Cys Ser Cys Ile Glu Arg Lys Val Asp Ile Thr Ser Thr Ala Glu Ser		540
545	550	555
Pro Asp Phe Glu Ala Arg Ala Gly Lys Cys Lys Thr Gln Cys Ser Asn		560
	565	570
Leu Pro Ile Phe Leu Gly Ile Phe Phe Ile Thr Val Ile Phe Thr Phe		575
	580	585
Met Ala Gly Thr Pro Ile Thr Val Ser Ile Leu Arg Cys Val Asn His		590
	595	600
Arg Gln Arg Ser Leu Ala Leu Gly Val Gln Phe Met Leu Leu Arg Leu		605
	610	615
Leu Gly Thr Ile Pro Gly Pro Ile Ile Phe Gly Val Thr Ile Asp Ser		620
625	630	635
Thr Cys Val Leu Trp Asp Ile Asn Glu Cys Gly Thr Lys Gly Ala Cys		640
	645	650
Trp Ile Tyr Asp Asn Ile Arg Met Ala His Met Leu Val Ala Ile Ser		655
	660	665
Val Thr Cys Lys Val Ile Thr Ile Phe Phe Asn Gly Leu Ala Ile Val		670
	675	680
Leu Tyr Lys Pro Pro Pro Pro Gly Thr Glu Val Ser Phe Gln Ser Gln		685
	690	695
Asn Val Val Val Ser Thr Ile Thr Val Glu Glu Asp Leu Asn Lys Ile		700
705	710	715
Glu Asn Glu Gly		720

<210> 55

<211> 2172

<212> DNA

<213> Rattus norvegicus

<400> 55

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ccttcttcga ctctcccagc ttctgatgag ccgccgggggt cacagctaag agagcttgag	240

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<211> 25

<212> DNA

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<220>

<223> Primer

<400> 56

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<212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 57

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25

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<400> 63

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26

<210> 64

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<223> Primer

<400> 65

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<211> 20

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<210> 67

<211> 24

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<223> Primer

<400> 67

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24

<210> 68

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<400> 68  
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<220>  
 <223> Primer

<400> 73  
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<210> 74  
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<400> 74  
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<400> 75  
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<210> 76  
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<400> 76  
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<210> 77  
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 <213> Rattus norvegicus

<400> 77  
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gcgtgttggg	tctatgataa	catcaggatg	gcgcataatg	tggtggctat	aagtgttact	1860
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<210> 78

<211> 484

<212> DNA

<213> Rattus norvegicus

<400> 78

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<210> 79

<211> 704

<212> DNA

<213> Rattus norvegicus

<400> 79

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<210> 80

<211> 2175

<212> DNA

<213> *Rattus norvegicus*

<400> 80

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<210> 81

<211> 2175

<212> DNA

<213> *Rattus norvegicus*

<400> 81

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<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 82

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<210> 83

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 83

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30

<210> 84

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 84

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